A STUDY ON BIOCHEMICAL PARAMETERS IN PATIENTS WITH ORGANOPHOSPHORUS POISONING

ABSTRACT

BACKGROUND

The emergency medicine department of Coimbatore Medical College receives 2-3 cases of Organophosphorus compound poisoning on a daily basis. The purpose of this study is to develop an improved scoring system for the risk stratification of Organophosphorus compound poisoning.

AIM

The study focuses on clinical features and biochemical parameters in patients admitted with acute organophosphorus poisoning and their prognostic significance.

MATERIALS & METHODS

The study was conducted at Coimbatore Medical College Hospital for a period of 1 year in patients admitted with acute organophosphorus poisoning in medicine emergency department. On admission, blood samples were sent for biochemical analysis. Based on the clinical presentation at admission, patients were grouped into mild moderate and severe poisoning according to the POP scoring, and the need for ventilator support was noted.

RESULTS

The intention of poisoning was found to be suicidal in almost 85 % of the cases admitted and 10% of poisoning was found to be accidental. The most common compound used for poisoning was dichlorfos closely followed by dimethoate and malathion. In our study 69 % cases were graded to have mild poisoning, 27% as moderate and only 4% as severe poisoning. Need for ventilatory support within 24 hours of admission was almost 100% in severe poisoning whereas it was only about 50% in moderate poisoning and less than 10% in mild poisoning. In patients with very low cholinesterase levels at the time of admission, the clinical recovery was much delayed and all cases required ventilatory support. The dose of atropine needed in the treatment of opc poisoning also has significant negative correlation with serum acetylcholinesterase levels.

CONCLUSION

Most of the biochemical parameters mentioned above show an early elevation in severe OP poisoning; which, when tested, can be used as an early indicator of severity.

KEY WORDS

Organophosphorus poisoning, APACHE II, POP score, Biochemical parameters